

Patent Abstracts of Japan

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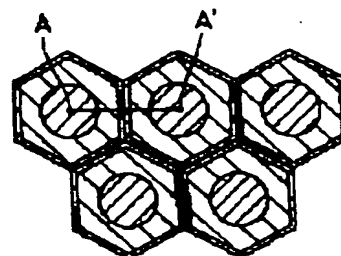
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TITLE : MANUFACTURE OF NB3SN
COMPOUND SUPERCONDUCTIVE
WIRE



ABSTRACT : PURPOSE: To improve critical current value characteristics of a superconductive wire by forming an Sn-included Cu plating layer for restricting diffusion of an Sn component on the surface of a primary composite body.

CONSTITUTION: Billets of Cu-Sn alloy in which the other parts than Sn, Ti comprises Cu are formed to be a cylindrical body, an Nb rod is inserted into the cylindrical body, extrusion work is applied, and groove roll rolling work and die drawing work are applied in order for forming a primary composite body of a hexagonal wire comprising a core part of Nb and alloy matrix. The surface of the hexagonal wire is degreased with alcohol, it is then cleaned with sulfur, and it is immersed in an electroless plating bath. The surface of the hexagonal wire is thus coated with a Cu plating layer. This comprises Cu-Sn alloy, and stabilized copper at a center of an outer tube and a cylinder enclosing its circumference are disposed, and the hexagonal wire is stacked between the outer tube and the cylinder. An HIP is then applied to provide a secondary composite body.

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